

U.S. Patent Application Serial No. 10/660,083
Amendment and Response dated October 30, 2007
Reply to Office Action of August 1, 2007

AMENDMENTS TO THE SPECIFICATION

Please replace the paragraph that begins at line 26 of page 10 of the specification with the following amended paragraph:

As facilitated by movement of needle 6, the canting force causes a lever or moment of retainer 14, which is opposed to prevent rotation of binding member 5. The canting force is opposed by engagement of needle communicating surface 23 with needle 6 in a non-binding or sliding orientation of binding member 5. As can be readily appreciated by one skilled in the art from the disclosure herein, retainer 14 is an example of retainer means for preventing inclination of the binding member.

Please replace the paragraph that begins at line 5 of page 12 of the specification with the following amended paragraph:

Hub retainer 14A extends transversely from a distal end of needle communicating surface 23. Hub retainer 14A extends a sufficient length for corresponding receipt within a hub slot 24 of catheter hub 4, as shown in FIG. 5. In association with a non-binding or sliding orientation of binding member 5, hub retainer 14A engages catheter hub 4, in hub slot 24, for releasably mounting with housing 2 of shield 1. As can be readily appreciated by one skilled in the art from the disclosure

U.S. Patent Application Serial No. 10/660,083
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herein, hub retainer 14A is an example of hub retainer means for releasably engaging a catheter hub.

Please replace the paragraph that begins at line 18 of page 12 of the specification with the following amended paragraph:

Aperture 21 is formed within aperture plate 18 for slideable engagement with needle 6 during movement between the retracted position and the extended position of shield 1. Aperture 21 includes binding surfaces 22 formed on opposing sides of aperture 21 that engage needle 6 to prevent movement thereof in the extended position of shield 1. As can be readily appreciated by one skilled in the art from the disclosure herein, binding surfaces 22 are an example of binding surface means for engaging the needle 6 to prevent slidable movement of the needle in the extended position of the shield 1. It is contemplated that engagement to prevent movement of needle 6 may include penetrating, frictional, interference, etc. It is envisioned that aperture 21 may have various geometric configurations, such as radial, polygonal, etc. It is further envisioned that aperture 21 may define an open cavity within aperture plate 18, such as, for example, "U" shaped and open to one or a plurality of edges of aperture plate 18.

U.S. Patent Application Serial No. 10/660,083
Amendment and Response dated October 30, 2007
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Please replace the paragraph that begins at line 24 of page 13 of the specification with the following amended paragraph:

As needle 6 is retracted and shield 1 is extended, friction members 26 create a drag force via engagement with needle 6 on binding member 5, as shown in FIG. 7, causing aperture plate 18 to rotate to the binding orientation. Blocking member surfaces 16A, 17A engage aperture plate 18 to facilitate rotation thereof from the perpendicular orientation into the binding orientation such that binding surfaces 22 engage needle 6. This configuration prevents movement of needle 6. As can be readily appreciated by one skilled in the art from the disclosure herein, friction members 26 are an example of drag inducing means for facilitating inclination of the binding member 5 relative to a longitudinal axis of the needle 6.

Please insert the following new paragraph before the paragraph that begins at line 11 of page 14 of the specification:

As can be readily appreciated by one skilled in the art from the disclosure herein, binding member 5 is an example of means for binding the shield 1 to the needle 6 in the extended position by enabling the binding means to incline relative to a longitudinal axis of the needle 6 to lock against the needle 6 and for permitting engagement with the needle 6 to prevent inclination and to sense the end of the needle 6 until the shield 1 is in the extended position.

Please replace the paragraph that begins at line 19 of page 14 of the specification with the following amended paragraph:

Referring to FIGS. 3B and 3C, alternate embodiments of binding member 5' are shown. FIG. 3B shows a member 44 having an aperture 45, with member 44 being disposed on aperture plate 18'. The diameter of aperture 45 is smaller than the diameter of aperture 21. Binding member 5' includes a drag inducing member, such as, aperture 45 that is formed by binding surfaces 46. Aperture 45 facilitates sliding engagement with needle cannula 6. Such engagement creates a frictional drag force with needle cannula 6, and in cooperation with blocking member 16, cause aperture plate 18' to move to the binding position. As can be readily appreciated by one skilled in the art from the disclosure herein, aperture 45 is an example of drag inducing means for facilitating inclination of the binding member 5 relative to a longitudinal axis of the needle 6 and binding surfaces 46 are an example of binding surface means for engaging the needle 6 to prevent slidable movement of the needle in the extended position of the shield 1.

FIG. 3C shows a member 41 having elements 42 defining an opening 40, with member 41 being disposed on aperture plate 18'. Binding member 5' includes a drag inducing member, such as, opening 40 that is formed by surfaces 43. The distance between surfaces 43 is smaller than the diameter of aperture 21. Surfaces 43 facilitate sliding engagement with needle cannula 6. Such engagement creates a frictional drag force

U.S. Patent Application Serial No. 10/660,083
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with needle cannula 6, and in cooperation with blocking member 16, cause aperture plate 18' to move to the binding position. It is contemplated that members 41 and 44 may be fabricated from materials such as polymerics, metals, elastomeric materials, etc. As can be readily appreciated by one skilled in the art from the disclosure herein, surfaces 43 are an example of drag means for facilitating inclination of the binding member 5 relative to a longitudinal axis of the needle 6, and each of the alternate embodiments of binding member 5' is an example of means for binding the shield 1 to the needle 6 in the extended position by enabling the binding means to incline relative to a longitudinal axis of the needle 6 to lock against the needle 6 and for permitting engagement with the needle 6 to prevent inclination and to sense the end of the needle 6 until the shield 1 is in the extended position.

Please replace the paragraph that begins at line 3 of page 16 of the specification with the following amended paragraph:

In an alternate embodiment, as shown in FIG. 13, binding member 5 includes separate frictional members 26' that are disposed on a proximal side and a distal side of aperture plate 18, respectively. Friction members 26' are friction fit polymer O-rings, which allow sliding of needle 6 therewith and provide a frictional drag force, similar to that discussed, via engagement with needle 6. The drag force is created as needle 6 slides and friction members 26' engage aperture plate 18. Friction members 26' engage

U.S. Patent Application Serial No. 10/660,083
Amendment and Response dated October 30, 2007
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aperture plate 18, and in cooperation with blocking member 16, cause aperture plate 18 to move to the binding position. Binding surfaces 22 engage needle 6 to prevent axial movement of needle 6, as discussed. It is contemplated that friction members 26' may be fabricated from materials such as polymeric, metals, etc. As can be readily appreciated by one skilled in the art from the disclosure herein, friction members 26' are an example of drag inducing means for facilitating inclination of the binding member 5 relative to a longitudinal axis of the needle 6.

Please replace the paragraph that begins at line 13 of page 16 of the specification with the following amended paragraph:

Alternatively, friction members 26' may form a monolithic member that links or joins two members 26", as shown in FIG. 14. Members 26" engage needle 6 and aperture plate 18 to prevent axial movement of needle 6, similar to that discussed with regard to FIG. 13. It is envisioned that aperture 21 may create a drag force via engagement with needle 6 to cause rotation of binding member 5, similar to that described. It is further envisioned that materials such as, for example, jells, greases, etc. may be employed to create a frictional drag force with needle 6 to cause rotation of binding member 5. As can be readily appreciated by one skilled in the art from the disclosure herein, members 26" are an example of drag inducing means for facilitating inclination of the binding member 5 relative to a longitudinal axis of the needle 6.